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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/053,467 | 11/07/2001 | Hiroshi Inoue | 09792909-5258 | 3706 |

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| EXAMINER | |
|---|---|
| WILLS, MONIQUE M | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1745 | |

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/053,467 | INOUE ET AL. | |
| | Examiner | Art Unit | |
| | Monique M. Wills | 1745 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *02 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,2,4-7 and 9-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-7 and 9-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Request for Continued Examination*

The request filed on December 30, 2004 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 10/053, 467 is acceptable and a RCE has been established. An action on the RCE follows.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 4-7 & 9-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al. U.S. Pat. 6,949,312.

With respect to claims 1 & 6, Kawakami teaches a negative electrode comprising tin, copper and bismuth (See the Abstract). Specifically, the anodic material includes Sn.A.X, where the formula embraces the instant claim whereby A=A, B=Sn and C=X. A indicates at least one kind of element selected from

transition metals, which include copper and iron. See the Abstract. X indicates at least on kind of element selected from antimony, bismuth and lead. See the abstract. The content of the constitute element Sn of the amorphous Sn.A.X alloy is Sn/(Sn+ A +X) = 2o to 80 atomic percent, embraces the composition A-B-C containing 5 to 40% by weight of B and 1 to 50% by weight of C. See the Abstract. With respect to claims 2 & 7, the reference teaches a negative electrode comprising A embraces copper because it includes any transition metal and C/X includes antimony. See the abstract. Regarding claims 6, 13-14 & 20 the anode is employed in a non-aqueous electrolyte battery including a cathode and electrolyte (col. 5, lines 50-60). Specifically, the anodic material includes Sn.A.X, where the formula embraces the instant claim whereby A=A, B=Sn and C=X. A indicates at least one kind of element selected from transition metals, which include copper and iron. See the Abstract. X indicates at least on kind of element selected from antimony, bismuth and lead. See the abstract. The content of the constitute element Sn of the amorphous Sn.A.X alloy is Sn/(Sn+ A +X) = 2o to 80 atomic percent, embraces the composition A-B-C containing 5 to 40% by weight of B and 1 to 50% by weight of C. See the Abstract. With respect to claims 11 & 12, the negative electrode further contains a carbonaceous material consisting of graphite (col. 17, lines 59-68). The prior art of Kawakami anticipates the instant claims as set forth. The

limitation in claims 4 & 9, with respect to the A-B-C composition having low crystallinity, is considered to be a inherent property of the electrode composition as set forth in the prior art, because Kawakami employs the same electrode material set forth by Applicant. The limitation in claims 5 & 10, with respect to the A-B-C composition being amorphous, is considered to be a property of the electrode composition as set forth in the prior art, because Kawakami employs the same electrode material set forth by Application. The limitation in claim 11, with respect to the negative electrode further containing a carbonaceous material which is capable of being doped and un-doped with lithium, is considered to be an inherent property of the electrode composition as set forth in the prior art, because Kawakami employs the same carbonaceous graphite additive set forth by Applicant. Support for this assertion is provided in MPEP 2112.01, " [where] [p]roducts of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, since Kawakami teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. See In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). With respect to claims 15-19, the content of the constitute element Sn of the amorphous Sn.A.X alloy is Sn/(Sn+ A + X) = 2o to 80 atomic percent,

embraces the composition A-B-C containing 5 to 40% by weight of B and 1 to 50% by weight of C. See the Abstract.

Kawakami teaches an anodic material but does not teach with sufficient specificity that copper, iron, antimony , bismuth and lead are included in the anodic composition. In other words, although the reference discloses the employment of all elements above, and suggest the combination as such, it does not specifically teach the combination of elements set forth.

However, with respect to the obviousness of selecting different anodic compositions elements, " [i]t is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." In re Kerkhoven.

## *Response to Arguments*

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Patrick Ryan, may be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov.Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER

MW

8/7/06